

Title (en)

Method of evaluating the function of phagocyte and utilization thereof

Title (de)

Verfahren zur Beurteilung der Phagozytenfunktion und dessen Anwendung

Title (fr)

Procédé pour l'évaluation de la fonction d'un phagocyte et son utilisation

Publication

EP 1818402 A3 20080402 (EN)

Application

EP 07004649 A 20020527

Priority

- EP 02778910 A 20020527
- JP 2001165954 A 20010531

Abstract (en)

[origin: EP1403369A1] Preparing phagocytes which have taken up a foreign microorganism comprising contacting the phagocytes with the microorganism before isolating the phagocytes, is new. Independent claims are also included for: (1) producing phagocytes having taken a foreign microorganism comprising: (a) contacting the phagocytes with the foreign microorganism in vitro; and (b) isolating the resultant phagocytes; (2) detecting and/or identifying a microorganism having been taken comprising: (a) immobilizing the phagocytes having taken a microorganism; (b) treatment to enhance permeability of cell membrane of the phagocytes; (c) exposing DNA of the foreign microorganism in the phagocytes; (d) in situ hybridization of a DNA probe for detection that is hybridizable with the DNA under stringent conditions; and (e) detecting and/or identifying the foreign microorganism by basing on the obtained signal; (3) evaluating function of phagocytes against a foreign microorganism comprising: (a) immobilizing the phagocytes having taken a microorganism; (b) treatment to enhance permeability of cell membrane of the phagocytes; (c) exposing DNA of the foreign microorganism in the phagocytes; (d) in situ hybridization of a DNA probe for detection that is hybridizable with the DNA under stringent conditions; and (e) identifying the phagocytic action and/or killing ability on the foreign microorganism by basing on the obtained signal; (4) evaluating phagocytic function against a foreign microorganism comprising: (a) immobilizing the phagocytes having taken the microorganism; (b) staining the phagocytes with dyes; and (c) identifying the phagocytic action and/or killing ability on the foreign microorganism by detecting the through observation of the characteristic state of the cell during or/and after phagocytosis; (5) evaluating immune function comprising: (a) isolating phagocytes from a test subject; (b) evaluating function of the phagocytes by using the evaluation method; (c) comparing results with the normal function of phagocytes for evaluating immune function of the subject; (6) evaluating differentiation efficiency in phagocytes comprising: (a) evaluating function of phagocytes against a foreign microorganism; and (b) identifying changes in function of the phagocytes chronologically for evaluation; (7) an evaluation method for judging the effect due to a modulator of the phagocytic function comprising: (a) allowing phagocytosis by incubation of a suspension of a foreign microorganism and phagocytosis in the presence or absence of a modulator of the phagocytic function; and (b) comparing the results for evaluating function of the phagocytes against the foreign microorganism; (8) screening modulators of function of the phagocytes comprising: (a) allowing phagocytosis by incubation of a suspension of a foreign microorganism and phagocytes in the presence or absence of a drug for estimating the modulation effect on phagocytic function, and (b) comparing the results for evaluating functions of the phagocytes against the microorganism based on the drug; (9) clinical examination comprising: (a) obtaining phagocytes from a test subject before and after administration of a drug to the subject; (b) evaluating function of the phagocytes by the evaluation method; and (c) reviewing plans for drug administration from effect of the drug as judged by basing on the evaluation results; (10) testing performance of kits for evaluation of function of phagocytes comprising: (a) immobilization of the phagocytes; (b) enhancing permeability of cell membrane of the phagocytes; (c) exposing DNA of the foreign microorganism; and (d) in situ hybridization of the exposed DNA with a suitable DNA probe for evaluating function of the phagocytes, during which the foreign microorganism, lysostaphin, lysozyme, N-acetylmuramidase or/and zymolase for exposing the DNA, and DNA probe are used; (11) testing performance of kits for detecting and/or identifying a foreign microorganism comprising obtaining phagocytes from a clinical specimen for immobilization, enhancing permeability of the cell membrane to expose DNA of the microorganism, in situ hybridization of the exposed DNA, and examining the obtained signal for detection and/or identification; and (12) kits for evaluating functions of phagocytes containing: (a) a foreign microorganism; (b) enzymes for exposing DNA; and (c) DNA probes for detection. ACTIVITY : Antimicrobial. No biological data given. MECHANISM OF ACTION : None given.

IPC 8 full level

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Citation (search report)

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